

Reply to Office Action dated March 21, 2007

REMARKS

Claims 1-28 are pending in this application. By this Amendment, the specification and claims 1-2, 4-6, 15 and 17 are amended. Various amendments are made for clarity and are unrelated to issues of patentability.

The Office Action rejects claims 1-28 under 35 U.S.C. §102(e) by U.S. Patent Publication 2003/0103577 to Harada et al. (hereafter Harada). The rejection is respectfully traversed with respect to the pending claims.

Independent claim 1 recites comparing a synchronization detection threshold value set for each corresponding section of a time period in which a quality of a pilot is measured, and a pilot bit error rate calculated for the each corresponding section, and judging a synchronization detection based on results of said comparing.

Harada does not teach or suggest at least these features of independent claim 1. More specifically, Harada discloses that an every-frame synchronism detecting unit 17 detects synchronism/asynchronism every frame from radio data and that the every-frame synchronism detecting unit 17 outputs synchronism data or asynchronism data, when a pilot symbol contained in a slot can be exactly decoded or cannot be exactly decoded, respectively. See, for example, Harada's paragraphs [0121], [0126] and [0179] and paragraph [0025], lines 1-12 as cited in the Office Action. Additionally, Harada discloses that a synchronism information counter for synchronism 18 judges synchronism/asynchronism based on a result from the every-frame synchronism detecting unit 17. That is, a number of times that the every-frame synchronism detecting unit 17 continuously detects synchronism/asynchronism is compared with a threshold

Reply to Office Action dated March 21, 2007

value T_1 preset to output judgment data indicating synchronism/asynchronism. The counter counts the number of times that the frame synchronism has been established and performs a comparing function based on the threshold value T_1 . See, for example, Harada's paragraph [0126]. Accordingly, this does not teach or suggest comparing a synchronization detection threshold value (set for each corresponding section) and a pilot bit error rate calculated for the each corresponding section. Rather, Harada counts a number of continuous frames of synchronism/asynchronism. This does not relate to comparing a synchronization detection threshold value set for each corresponding section, and a pilot bit error rate calculated for the each corresponding section.

Furthermore, Harada does not teach or suggest judging a synchronization detection based on results of the comparing, as recited in independent claim 1. Rather, as discussed in paragraph [0121], for example, the every-frame synchronism detecting unit 17 detects synchronism/asynchronism every frame. This does not suggest judging based on results of the comparing.

Accordingly, Harada does not teach or suggest all the features of independent claim 1. Thus, independent claim 1 defines patentable subject matter.

Independent claim 6 recites calculating a first pilot bit error rate (BER) of an uplink allocated to a finger, for a first section, comparing the first pilot BER calculated for the first section with a first synchronization detection threshold value set for the first section, and judging the uplink is in synchronization status when the first pilot BER is smaller than the first synchronization detection threshold value. Further, independent claim 6 also recites calculating a

Reply to Office Action dated March 21, 2007

second pilot BER of the uplink for a second section when the first pilot BER is not smaller than the first synchronization detection threshold value, comparing the second pilot BER calculated for the second section with a second synchronization detection threshold value set for the second section, and judging the uplink is in synchronization status when the second pilot BER is smaller than the second synchronization detection threshold value.

For at least similar reasons as set forth above, Harada does not teach or suggest at least these features of independent claim 6. Further, when discussing independent claim 6, the Office Action references Harada's paragraphs [0021], [0129], and [0025]. However, these cited sections do not relate to numerous features of independent claim 6. For example, Harada does not disclose calculating a second pilot BER when the first pilot BER is not smaller than the first synchronization detection threshold value. Harada therefore also does not suggest comparing the second pilot BER with a second synchronization detection threshold value. Rather, as discussed above, Harada discloses that a number of times that the every-frame synchronism detecting unit 17 continuously detects synchronism/asynchronism is compared with a threshold value T_1 . Accordingly, Harada does not teach or suggest all the features of independent claim 6. Thus, independent claim 6 defines patentable subject matter.

Independent claim 15 recites logic configured to compare a synchronization detection threshold value set for each corresponding section of a time period, wherein a pilot bit error rate is calculated for the each corresponding section. Independent claim 15 also recites logic configured to determine a synchronization detection for each section based on a result of said comparison.

Reply to Office Action dated March 21, 2007

For at least similar reasons as set forth above, Harada does not teach or suggest all the features of independent claim 15. Thus, independent claim 15 defines patentable subject matter.

For at least the reasons set forth above, each of independent claims 1, 6 and 15 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

For example, dependent claim 2 recites that when a pilot bit error rate calculated in a certain section of said time period is smaller than the corresponding synchronization detection threshold value set for the section, it is judged to be in synchronization status, and when a pilot bit error rate calculated for every section of said time period is not smaller than a synchronization detection threshold value set for every section, a pilot bit error rate calculated for a first section is compared with a certain synchronization failure threshold value, and when the pilot bit error rate of the first section is greater than the certain synchronization failure threshold value, it is judged to be synchronization failure. However, the cited paragraph [0121] of Harada does not suggest all the claimed features. For example, Harada does not suggest that when a pilot bit error rate calculated for every section of the time period is not smaller than a synchronization detection threshold value, a pilot bit error rate calculated for a first section is compared with a certain synchronization threshold value. Harada does not teach or suggest at least these features of dependent claim 2. Thus, dependent claim 2 defines patentable subject matter at least for this additional reason.

Reply to Office Action dated March 21, 2007

Additionally, dependent claim 3 recites that the time period for measuring the pilot quality includes a plurality of frames or a plurality of slots. See also dependent claim 8 or 16. Harada does not teach or suggest at least these features of dependent claims 3, 8 or 16. Rather, as is clearly described in paragraph [0254] for FIG. 17 and paragraph [0121] for FIG. 2, Harada utilizes an every-frame synchronism detecting unit 17 to detect synchronism/asynchronism every frame. This does not suggest that the time period includes a plurality of frames or a plurality of slots. Thus, dependent claims 3, 8 and 16 define patentable subject matter at least for this additional reason.

Still further, dependent claim 5 recites that when the result of the comparing for every section indicates the pilot bit error rate for every section is not smaller than a corresponding synchronization detection threshold value set for every section, a pilot bit error rate calculated for a first section is compared with a synchronization failure threshold value, and when the pilot bit error rate of the first section is greater than the corresponding synchronization failure threshold value, a synchronization failure is indicated. See also dependent claim 18. The Office Action cites paragraph [0121] for these features. However, Harada does not suggest when the result of the comparing for every section indicates the pilot bit error rate for every section is not smaller than a corresponding synchronization detection threshold value set for every section, a pilot bit error rate calculated for a first section is compared with a synchronization failure threshold value. Harada does not teach or suggest at least these features of dependent claims 5

Serial No. **10/621,463**
Reply to Office Action dated March 21, 2007

Docket No. **P-0563**

and 18. Thus, dependent claims 5 and 18 define patentable subject matter at least for this additional reason.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-28 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,



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Date: June 18, 2007

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